

1. GENERAL
- THIS PROJECT IS LOCATED AT THE INTERSECTION OF MD 170 (AVIATION BLVD.) AND STONEY RUN RD. IN ANNE ARUNDEL COUNTY, MARYLAND AND INVOLVES ROADWAY CONSTRUCTION AND THE CONSTRUCTION OF A NEW SIGNAL THAT IS EFFECTED BY THIS CONSTRUCTION. MD 170 (AVIATION BLVD.) IS ASSUMED TO RUN IN A NORTH/SOUTH DIRECTION.
11. INTERSECTION OPERATION
- THE PROPOSED TRAFFIC SIGNAL WILL OPERATE IN A NEMA SIX (6) PHASE, FULLY TRAFFIC ACTUATED MODE. THE MD 170 APPROACHES WILL OPERATE CONCURRENTLY, WITH AN EXCLUSIVE LAG LEFT TURN PHASE FOR SOUTHBOUND TRAFFIC. THE STONEY RUN RD. APPROACH WILL OPERATE SEPARATELY.
- AN EIGHT PHASE FULLY TRAFFIC ACTUATED CONTROLLER WITH TWO (2) FOUR CHANNEL RACK MOUNTED LOOP DETECTOR AMPLIFIERS, TELEMETRY MODULE HOUSED IN A NEMA SIZE SIX (6) BASE MOUNTED SYSTEM CABINET WILL BE INSTALLED.

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR

ITEM NO.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
	963010	2 EA	DETECTOR AMPLIFIER 4 CHANNEL RACK MOUNT
	973023	171 SF	SHEET ALUMINUM SIGNS TO CONSIST OF:
-	1 EA	D3-2 SIGN (16 IN. X 96 IN.) "Aviation Blvd." SINGLE FACED	
-	2 EA	D3-2 SIGN (16IN. X 96 IN.) "Stoney Run Rd" DUAL FACED	
-	1 EA	SHIELD ASSEMBLY "NORTH, MD170, DIAGONAL ARROW", (30 IN. X 51 IN.) - GROUND MOUNTED	
-	1 EA	SHIELD ASSEMBLY "SOUTH, MD 170, LEFT ARROW" (48 IN. X 75 IN.) - POLE MOUNTED	
-	2 EA	D3-3 SIGN (48 IN. X 30 IN.) "STONEY RUN RD NEXT SIGNAL" - GROUND MOUNTED	
-	2 EA	R3-5L SIGN (30 IN. X 36 IN.) "LEFT TURN"	
-	1 EA	R1-2 SIGN (36 IN. X 36 IN.) "YIELD" GROUND MOUNTED	
-	1 EA	W4-1R SIGN (36 IN. X 36 IN.) "MERGE" GROUND MOUNTED	
-	1 EA	SHIELD ASSEMBLY "TO, I 195, DIAGONAL ARROW", (30 IN. x 51 IN.) - GROUND MOUNTED	
-	1 EA	SHIELD ASSEMBLY "TO, MD 295, DIAGONAL ARROW", (30 IN. x 51 IN.) - GROUND MOUNTED	
971017	1 EA	NEMA SIZE 6 BASE MOUNTED SYSTEM CABINET AND CONTROLLER	

B. EQUIPMENT TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR

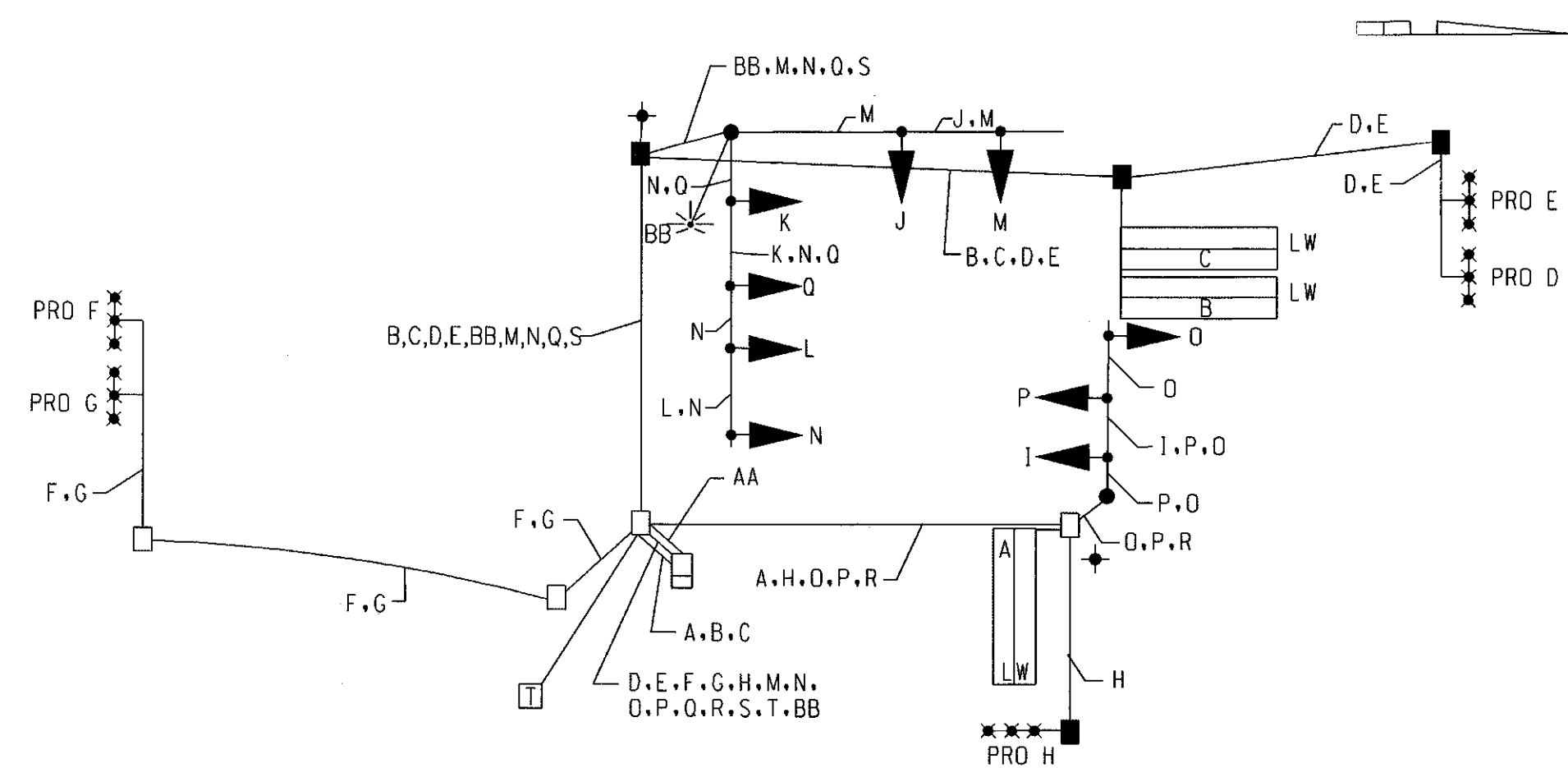
ITEM NO.	CATEGORY CODE NO.	QUANTITY	DESCRIPTION
	120500	1 LS	MAINTENANCE OF TRAFFIC
	203030	1 CY	TEST PIT EXCAVATION
	585624	84 LF	FURNISH AND INSTALL 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
	801004	8 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
	801104	15 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH x 4 INCH
	801106	140 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4 INCH X 6 INCH
	805125	98 LF	FURNISH AND INSTALL 2 INCH DIAMETER PVC ELECTRICAL CONDUIT, SCHEDULE 80, TRENCHED
	805115	86 LF	FURNISH AND INSTALL 3 INCH DIAMETER PVC ELECTRICAL CONDUIT, SCHEDULE 80, PUSHED AND BORED
	805140	20 LF	FURNISH AND INSTALL 4 INCH DIAMETER PVC ELECTRICAL CONDUIT, SCHEDULE 80, TRENCHED
	805118	250 LF	FURNISH AND INSTALL 4 INCH DIAMETER PVC ELECTRICAL CONDUIT, SCHEDULE 80, BORED
	805135	449 LF	FURNISH AND INSTALL 3 INCH DIAMETER PVC ELECTRICAL CONDUIT,SCHEDULE 80, TRENCHED
	805160	43 LF	FURNISH AND INSTALL 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE
	810010	30 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1- CONDUCTOR NO. 4 AWG - THHN/THWN
	811001	5 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
	818050	1 EA	FURNISH AND INSTALL STEEL POLE WITH TWIN 50 FOOT AND 60 FOOT MAST ARMS
	818030	1 EA	FURNISH AND INSTALL STEEL POLE WITH A SINGLE 38 FOOT MAST ARM
	802501	313 LF	FURNISH AND INSTALL NO 6 AWG STRANDED BARE COPPER GROUND WIRE
	837001	2 EA	FURNISH AND INSTALL GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH
	807400	1 EA	FURNISH AND INSTALL ELECTRIC UTILITY SERVICE EQUIPMENT 120/240 VOLTS 60 AMPS
	861116	190 LF	FURNISH AND INSTALL ELECTRIC CABLE - 2 CONDUCTOR (NO. 12 AWG)
	861104	500 LF	FURNISH AND INSTALL ELECTRICAL CABLE- 2 CONDUCTOR (ALUMINUM SHIELDED)
	861107	70 LF	FURNISH AND INSTALL ELECTRICAL CABLE- 5 CONDUCTOR (NO 14 AWG)
	861108	947 LF	FURNISH AND INSTALL ELECTRICAL CABLE- 7 CONDUCTOR (NO 14 AWG)
	862101	1433 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO 14 AWG)
	862102	452 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR)
	810555	2 EA	FURNISH AND INSTALL MICRO LOOP PROBE SET 1000 FOOT LEAD IN
	810550	3 EA	FURNISH AND INSTALL MICRO LOOP PROBE SET 500 FOOT LEAD IN
	860272	27 EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION
	801711	23 SF	REMOVE EXISTING GROUND MOUNTED SIGNS AND SUPPORTS
	813014	90 SF	INSTALL GROUND MOUNTED SIGN
	813015	94 SF	INSTALL OVERHEAD SIGN
	866104	1 EA	FURNISH AND INSTALL 20 FOOT LIGHTING ARM ON SIGNAL STRUCTURE
	831010	1 EA	FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE
	871202	1 EA	INSTALL CONTROLLER AND CABINET BASE MOUNTED

C. MATERIAL TO BE REMOVED AND RETURNED TO SHA

NONE

ALL EXISTING REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR

WIRING DIAGRAM



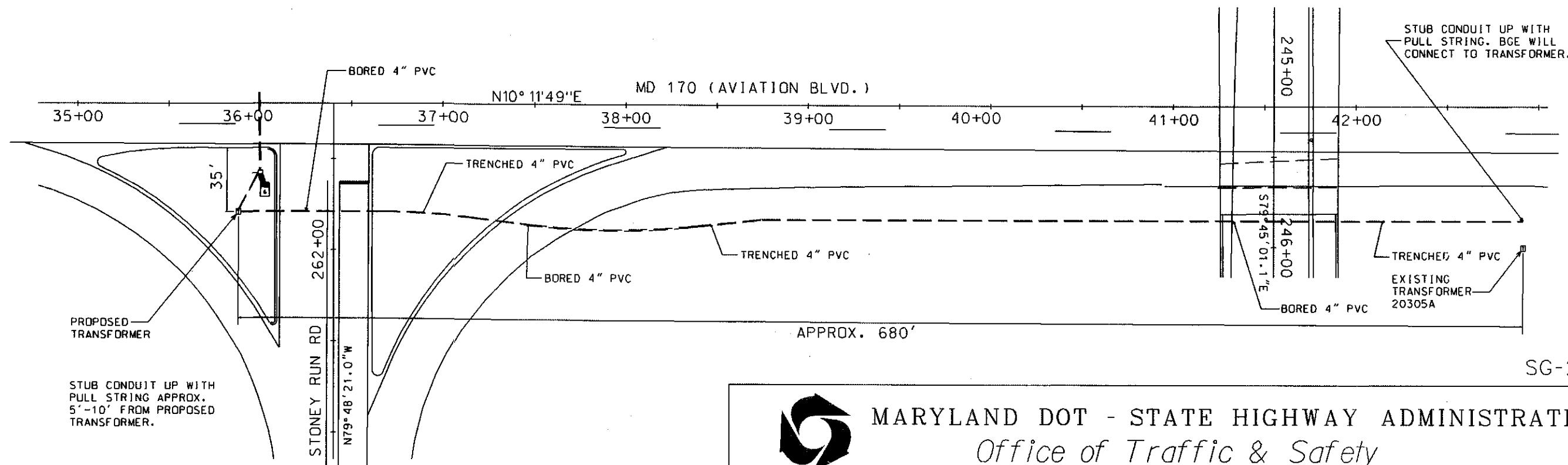
WIRING KEY

A-C	2 CONDUCTOR ELECTRICAL CABLE ALUMINUM SHIELDED
D-H	MICRO PROBE CABLE
BB	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG TYPE T.C.)
I-L	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
M-Q	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
R-S	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
AA	1 CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG)
PRO	MICRO LOOP PROBES
LW	LOOP WIRE
PS	POWER SOURCE
+	GROUND ROD

NOTE: FIBER OPTIC INTERCONNECT TO BE INSTALLED BY OTHERS

PHASE CHART

	1	2	3	4	5	6	7	8	9	
	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)	
PHASE 2 & 6	G	G	R	R	R	G	G	R	R	→
PHASE 2 & 6 CHANGE	Y	Y	R	R	R	Y	Y	R	R	→
PHASE 1 & 6	R	R	G	G	G	R	R	R	R	→
PHASE 1 & 6 CHANGE	R	R	Y	Y	Y	Y	Y	R	R	→
PHASE 4	R	R	R	R	R	R	R	G	G	→
PHASE 4 CHANGE	R	R	R	R	R	R	R	Y	Y	→
FLASHING OPERATION	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	→



CONDUIT ROUTING TO POWER SOURCE



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION

SIGNAL DETAILS
MD 170 (AVIATION BLVD.) AND STONEY RUN RD

DRAWN BY: DBERRILL	F.A.P. NO. SEE TITLE SHEET	TS NO. 4067	SHEET NO. 43 OF 43
CHECKED BY: EMILLER	S.H.A. NO. AA2895187		
SCALE: 1"=20'	COUNTY: ANNE ARUNDEL	T.I.M.S. NO. E 467	
DATE: 11/01/02	LOG MILE: 02017007.15		

Baker